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IB No. 349/63
4 December 1963
Copy 9 of 2

MEMORANDUM FOR: Chief, Manufacturing and Services Division, ORR

25X1A ATTENTION : [REDACTED], MS/D
THROUGH : Chief, Requirements Branch, Reconnaissance Group, CGS
FROM : Chief, CIA/PID (NPIC)
SUBJECT : Shen-yang Arsenal Complex
REFERENCE : (1) ORR Requirement No. [REDACTED]
(2) CIA/PID Project No. [REDACTED]

25X1
25X1D

1. This memorandum is in response to the referenced requirement which asks for an analysis of arsenals at Shen-yang, China, including the level of current activity and expansion since [REDACTED]

2. Photographic coverage of Shen-yang and the vicinity was analyzed and four installations have been located and identified as being arsenals or producing munitions. Following is a detailed analysis of these installations with related annotated photo enlargements enclosed.

25X1D

25X1A 3. The Shen-yang Arsenal 90th [REDACTED], [REDACTED] 25X1
25X1D [REDACTED] is the largest and most important arsenal in the complex. A copy of a memorandum [REDACTED] dated 24 May 1963 to Chief, Military-Economics Division ORR; [REDACTED] covering this installation, plus the Shen-yang Aircraft Engine Plant, is enclosed. Photo enlargements from Missions 25X1D [REDACTED] were enclosed with the copy memorandum. The enclosure 25X1D CIA/PID/IB-P-786/63 is from [REDACTED] and has been annotated to correspond with the copy memo. The changes in construction between the [REDACTED] missions were slight and are referred to in two places in the copy memo. The Key to Annotations on page 5 of the copy memo refer to the referenced annotations on enclosed photo enlargement:

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SUBJECT: Shen-yang Arsenal Complex

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No. 3 Engine test building - same structure as annotation A of enclosed graphic.

No. 4 Same as annotation B of enclosed graphic.

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The Key to Annotations at the top of page 7 of the copy memo refers to items on [] which can be cross referenced to the enclosed graphic.

No. 5 Test cell building - same as annotation D on enclosed graphic.

No. 6 Power plant - same as annotation 25 on enclosed graphic.

25X1D

No. 7 Dismantled MIG-19 is new on []

25X1D The small amounts of raw material, paucity of vehicles and rail cars, and lack of smoke being emitted from stacks and vents indicates a low level of plant activity in []

4. The shell loading plant (See enclosure CIA/PID/IB-P-787/63), is located just east of the Shen-yang Arsenal 90th. Facilities at this plant include one fabrication building, numerous revetted and unrevetted production and storage buildings, and two boiler houses. See enclosure CIA/PID/IB-P-787/63 for detailed analysis. Such facilities can be used for shell loading and storage. The housed test range (approximately 300 meters long) also is indicative of shell loading.

This plant is only served by road. Production activity may be stopped, or at the most, very low, as no smoke is being emitted from the boiler house stacks and no vehicles or personnel can be observed. However, the plant appears to be well maintained and there is coal stored by at least one of the boiler houses.

5. The probable ammunition loading facility (See enclosure CIA/PID/IB-P-788/63), is located at the southeast end of the Shen-yang Southeast Airfield which is adjacent to the Shen-yang Arsenal 90th.

This plant is secured by a solid wall and is served only by road. The exact function cannot be determined; however, some buildings are revetted and others are surrounded by a heavy barrier of trees giving the impression that explosives are being handled or stored. The boiler house is not in operation, no vehicles or personnel can be observed and the road system within the plant does not appear to have been used recently or at least only to a very limited degree which indicated that the plant is shut down or operating at a very low level. See enclosure CIA/PID/IB-P-788/63 for detailed analysis.

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SUBJECT: Shen-yang Arsenal Complex

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6. The Wen-kuan-tun Sub arsenal, Mukden 90th

is located 4.8 nautical miles north northeast of the old walled city of Shen-yang at 41 52N - 123 29E. The plant is secured by a solid wall and is served by both rail and road.

This integrated plant produces initiators, boosters, bursting powder as well as artillery projectiles. See enclosure CIA/PID/IB-P-789/63 for analysis of plant facilities. Lead azide is probably the initiator produced and black powder the bursting charge. The manufacturing section (G) contains foundries where projectiles are cast and numerous machine shops where the external and internal surfaces of the projectile are machined.

Vehicles and rail cars were observed in the plant area, smoke was being emitted by several stacks and crated goods were stored in the open which indicates that the plant is currently active.

The total roof cover of the production buildings, exclusive of explosive manufacturing, is 421,780 square feet. Production buildings pertaining to explosive manufacturing total an additional 203,445 square feet.

7. The photo analyst assigned to this project was [redacted] who may be contacted on [redacted] should you have further questions concerning this project. This memorandum and its enclosure completes this requirement.

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ENCLOSURES:

- 4 Annotated Photo Enlargements (CIA/PID/IB-P-786/63 thru P-789/63)
- 1 Copy of IOM (IB-92/63)

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24 May 1963
Copy 1 of 2

25X1A MEMORANDUM TO: Chief, Military-Economic Division, ORR
ATTENTION : [REDACTED], M/AS
FROM : Chief, CIA/FID (NPIC)
SUBJECT : Shen-Yang Aircraft Engine Plant #410
REFERENCE : Requirement No. RR/91/63
Project No. C 535/63

1. This memorandum is in answer to referenced requirement concerning Shen-Yang Aircraft Engine Plant.

2. This study primarily concerns two areas: one the main plant of Shen-Yang Arsenal 90th and Shen-Yang Aircraft Engine Plant #410. The following paragraphs contain a description of each plant area and a list of annotations for each area. These annotations are keyed to photo enlargements Enclosures #1 and #2.

3. Shen-Yang Arsenal 90th

25X1D Shen-Yang Arsenal is located in the Ta Tung ward of Shen-Yang at coordinates [REDACTED]. The arsenal is served by a rail line and seven rail spurs. The entire arsenal area is enclosed by a masonry wall approximately [REDACTED] high and all entrances appear to be well secured. The total estimated floorspace is 3,110,045 square feet which is contained within assembly buildings, machine shops, workshops, administration buildings, boiler houses, test facilities, warehouses and storage buildings. All buildings in the arsenal were included in the total estimated floorspace but only major buildings have been annotated.

25X1D [REDACTED] photography was reviewed and
25X1D comparison made with [REDACTED] photography. This comparison shows a
25X1D complete rehabilitation of the entire arsenal. A further
25X1D comparison re [REDACTED] the construction of new buildings and the modification
of some older buildings. These changes are indicated by the red stars
(Enclosure #1). Additional changes occurred between [REDACTED]
25X1D [REDACTED] These changes were the construction of a new
building (Annotation #56, Enclosure #1 and Annotation #1 Enclosure #2) and

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IB 92/63
Page 2

25X1

and the partial completion of two wings on the engine test building at Annotation A. The unusual features at this plant are located at Annotation A, Annotation B, Annotation #89 (Enclosure #1) and Annotation #1 (Enclosure #2). The following is a description of each of the aforementioned annotations. Annotation A; this building has been identified as a test facility for an unidentified engine. Construction started possibly in [] and the building was approximately 90 percent complete on []

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[] The building is multi-winged with the base wing measuring 470' x 65'. There are seven projecting wings, two of which are under construction and measure 85' x 30' and are probably single test bays, one measures 150' x 25' and is probably a single test bay and four measure 150' x 55', three are probably double test bays and the fourth a single test bay with an additional servicing area. The seven wings are served by individual exhaust towers approximately 65 to 75 feet above ground level. Annotation B; this area consist of three buildings one large and two smaller buildings. The large building was a former thermal electric power plant, which has been converted since [] to house three engine test cells. The two smaller buildings are [] but are prior to [] one building houses a large test cell and the other is an unidentified building. The three buildings are connected by pipeline. Annotation #89; the function of this building is unknown. It is adjacent to the transformer yard (Annotation #90) but separated by an additional fence. The building appears to have been modified between []

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[] The measurements are 125' x 50' and the roof has two levels with the south section being approximately 50 to 55 feet tall. This tall section is rail served. Annotation #1 (Enclosure #2) This is a new building [] The foundation was started []

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[] (Annotation #56). The building was completed on [] The building measures approximately 150' x 75' and is approximately 60 to 70 feet tall. Annotation #38 (Enclosure #1) [] These objects are approximately [] wide, all have the same configuration. Photography on [] (Annotation #2, Enclosure #2) []

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IB 92/63
Page 3

KEY TO ANNOTATIONS: SHEN-YANG ARSENAL 90TH ENCLOSURE #1

1. Assembly building	665' x 490'
2. Assembly building	665' x 275'
3. Assembly building	360' x 330'
4. Assembly building	400' x 225'
5. Assembly building	425' x 250'
6. Assembly building	330' x 260'
7. Assembly building	570' x 250'
8. Assembly building	440' x 130'
9. Workshop	345' x 115'
10. Workshop and storage yard	305' x 115' - 270' x 130'
11. Possible forge or smelter	240' x 50'
12. Workshop	320' x 95' - 85' x 80'
13. Administration building	310' x 60' - 70' x 25' - 70' x 25'
14. Workshop and machine shop	210' x 175'
15. Workshop	210' x 75'
16. Machine shop and Workshop	215' x 135'
17. Machine shop and Workshop	320' x 135'
18. Machine shop	320' x 150'
19. Machine shop	215' x 150'
20. Machine shop	240' x 135'
21. Machine shop	175' x 85'
22. Storage building	240' x 150'
23. Machine shop	240' x 135'
24. Machine shop	345' x 135'
25. Storage building	160' x 90'
26. Storage building	110' x 80'
27. Machine shop	150' x 120'
28. Storage building	140' x 120'
29. Storage building	145' x 105'
30. U/I building	95' x 90'
31. U/I building	160' x 65'
32. Workshop	240' x 65'
33. Storage building	220' x 75'
34. Machine shop	205' x 125'
35. Workshop	205' x 65'
36. Machine shop	220' x 150'
37. Possible forge	240' x 85'
38. Administration building	150' x 35'
39. Workshop	200' x 85'
40. Boiler house and coal stockpile	120' x 95'
41. Machine shop	170' x 50'
42. Machine shop	160' x 50'
43. Three administration buildings	
44. Administration and possible laboratory buildings	
45. Possible laboratory buildings	

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IB 92/63
Page 4

46. Five unidentified service buildings
47. Administration building 95' x 55'
48. Administration and security building 370' x 40'
49. Motor vehicle storage and repair shed 200' x 70'
50. Fifteen fenced storage buildings 70' x 15' each
51. Storage building
52. Power Plant and coal stockpile 175' x 150'
53. Workshop 135' x 50'
54. Workshop 225' x 105'
55. Workshop 340' x 105'
56. Foundation for new building
57. Storage building 200' x 40'
58. Storage buildings
59. Storage buildings
60. Security buildings and guard quarters
61. Workshop and Machine shop 195' x 130' - 150' x 75'
62. Gantry crane
63. Storage building 135' x 40'
64. Storage buildings
65. Storage building 225' x 40'
66. Underground POL reservoir, pumping and control station
67. Seven storage buildings
68. Three warehouses
69. Unidentified building, within a secured area
70. Two large and two small warehouses
71. Two workshops
72. Maintenance shops and storage buildings
73. Warehouse 350' x 80'
74. Storage building 65' x 30'
75. Two large warehouses
76. Five warehouses
77. Six storage sheds and two large warehouses
78. Two warehouses and four storage sheds
79. Two warehouses and one unidentified building
80. Four warehouses
81. Open storage yard and two gantry cranes
82. Gantry crane and possible shipping and receiving building
83. Five warehouses
84. Four warehouses
85. Administration and six unidentified service buildings
86. Three water reservoirs
87. Administration building and storage buildings
88. Four unidentified objects on flatcars
89. Possible test building 125' x 50'
90. Transformer yard

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IB 92/63
Page 5

- A. Test building
- B. Test Area, three buildings

KEY TO ANNOTATIONS: SHEN-YANG ARSENAL 90th ENCLOSURE #2

- 25X1D 1. New building, function unknown, 150' x 75' by approximately 60-70 feet tall. Erected between [] Foundation started []
- 25X1D 2. Unidentified objects, one the same as shown on []
- 25X1D 3. Engine test building, two wings partially completed between [] and [] Construction started possibly in []
- 25X1D 4. Former thermal electric power plant converted to test cell building prior to []

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4. Shen-Yang Aircraft Engine Plant:

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25X1D Shen-Yang Aircraft Engine Plant is located in the Ta Tung ward of Shen-Yang adjacent to Shen-Yang Arsenal 90th and Shen-Yang Airfield Southeast. The coordinates are [] The plant area is enclosed by a masonry wall approximately [] high. The Engine Plant is served by the same rail line which serves the arsenal. This study was conducted from the same photography utilized in the study of Shen-Yang Arsenal. The Engine Plant has a total estimated floor space of 955, 475 square feet. All buildings were included in the total estimated floor space, only the major buildings have been annotated. This plant was rehabilitated between [] A comparison between [] shows the construction of three new buildings which are indicated by the red stars (Enclosure #1). The buildings located at Annotations #1 and #3 were constructed prior to []

25X1D [] The power plant located at annotation #25 was under construction on [] and was about 50 percent complete

25X1D [] and is in the final stages of completion. The Engine test building at Annotation D contains six test cells. The test cell on the northern end of the building is undergoing modification [] This photograph shows what appears to be a possible cleared blast area, in the rear of the test cell mentioned above (Annotation #5 Enclosure #2). This construction and modification activity was in an early stage []

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IB 92/63
Page 6

KEY TO ANNOTATIONS: SHEN-YANG AIRCRAFT ENGINE PLANT ENCLOSURE #1

1. Storage building	250' x 110'
2. Workshop and storage	360' x 185'
3. Storage building	180' x 70'
4. Assembly and machine shop	325' x 200'
5. Machine shop and workshop	170' x 145'
6. Foundry	185' x 185'
7. Boiler house	135' x 55'
8. Administration building	265' x 65'
9. Storage building	180' x 45'
10. Assembly building	530' x 220'
11. Assembly and Machine shop	580' x 170'
12. Assembly building	300' x 160'
13. Workshops	170' x 115'
14. Storage buildings	80' x 60' - 70' x 55'
15. Assembly building	250' x 170'
16. Storage building	200' x 45'
17. Administration	230' x 55' - 200' x 40' - 100' x 40' - 100' x 40'
18. Maintenance shops	100' x 30'
19. Storage building	150' x 55'
20. Administration building	75' x 75'
21. Storage building	
22. Administration buildings	
23. Administration buildings	
24. Two warehouses	
25. Power plant under construction	
26. Four warehouses	
27. Machine shop	165' x 110'
28. Workshop	230' x 100'
29. Workshop	135' x 135'
30. Storage building	100' x 35'
31. Storage building	85' x 40'
32. Warehouse	150' x 45'
33. Underground POL reservoir, pumping and control station	
34. Three large warehouses and two storage sheds	
35. Boiler house	130' x 50'
D. Test Cell building	
E. Additional Administration area	
F. Shen-Yang Airfield southeast and support area	

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IB 92/63
Page 7

KEY TO ANNOTATIONS: SHEN-YANG AIRCRAFT ENGINE PLANT ENCLOSURE #2

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5. Test cell building - one test cell modified and a possible blast area constructed between [REDACTED]
6. Power plant - construction began [REDACTED], approximately 50 percent [REDACTED]
7. Dismantled Mig-19 and Shen-Yang Airfield Southeast repair facilities.

5. Summary

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6. The following photographic references are included to illustrate the number of photographic missions and the time span included in this study:

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7. The photo analyst on this project is [REDACTED] who may be contacted on [REDACTED] should you have further questions regarding this project.

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ENCLOSURES:

1. CIA/PID/IB-P-116/63
2. CIA/PID/IB-P-117/63

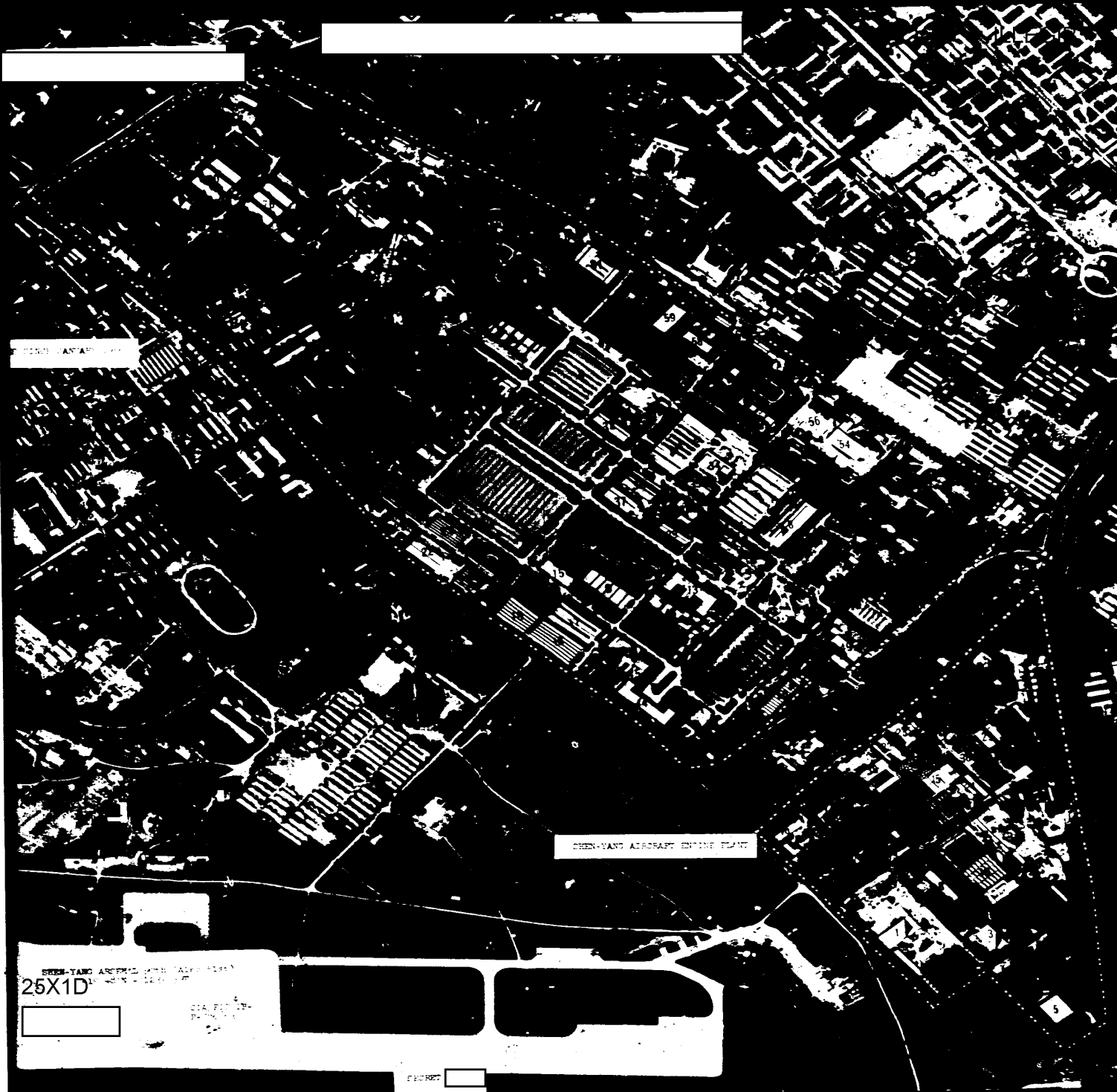
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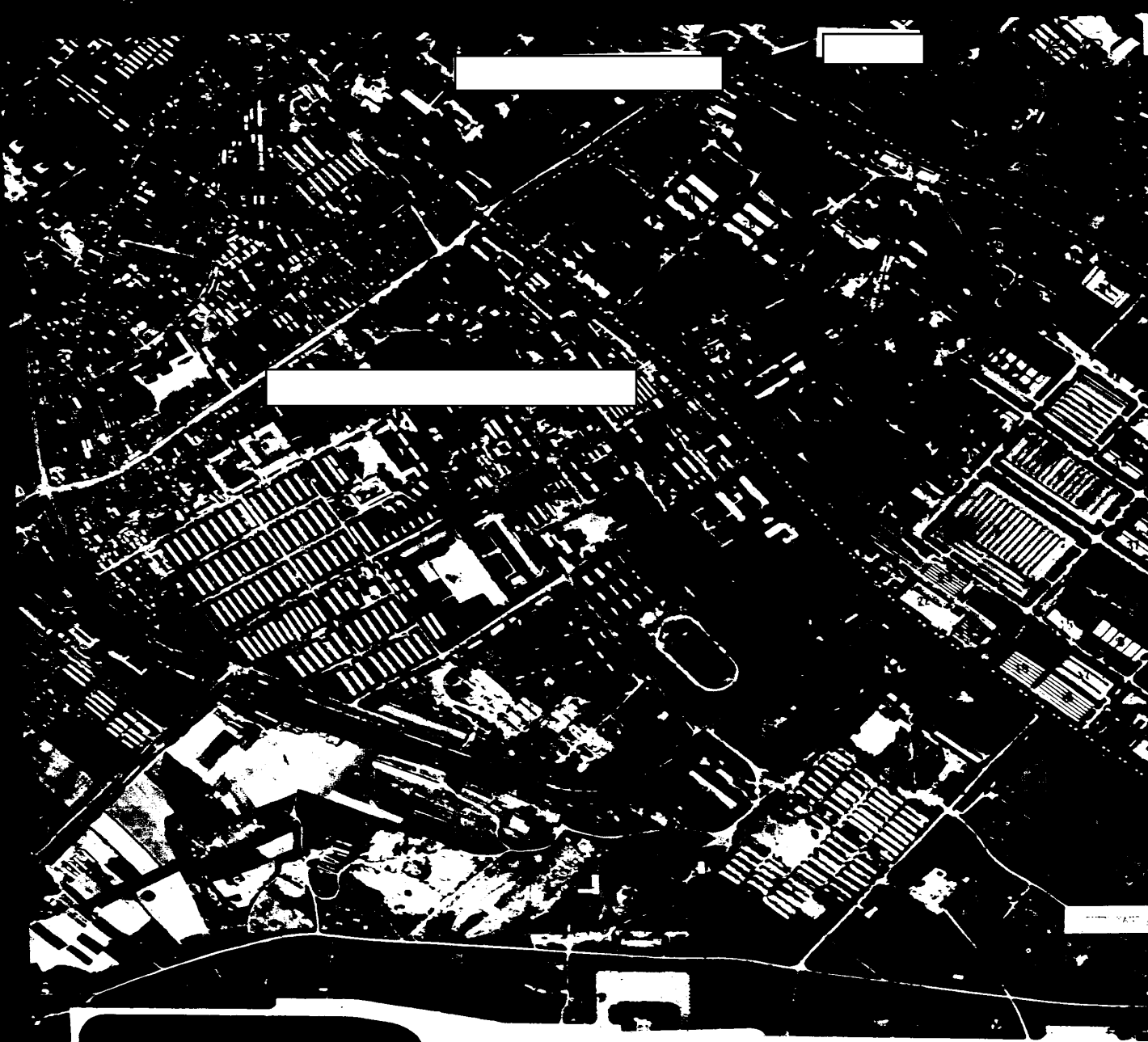
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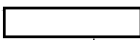




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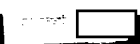
THAN-YANG AIRFIELD (ALSO 5100)
AL - 5100 - 1230 37E



CIA PHOTO-
P-1000



25X1D





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- | | |
|-----------------------------------|--|
| 1. 4 Revetted Storage Buildings | 26. Processing Building |
| 2. Revetted Storage Building | 27. Probable Administration Building |
| 3. Warehouse | |
| 4. 1 Revetted Processing Building | 28. Processing Building |
| 5. Administration Building | 29. Boiler House |
| 6. Processing Building | 30. Probable Warehouse |
| 7. 2 Probable Warehouses | 31. Revetted Storage Building |
| 8. Assembly-type Building | 32. Revetted Area with 10 Processing and 3 Storage Buildings |
| 9. Warehouse | 33. 3 Warehouses |
| 10. Warehouse | |
| 11. Test Range | 34. Warehouse |
| 12. 1 Processing Building | 35. Probable Maintenance Building |
| 13. 2 Revetted Storage Buildings | 36. Boiler House |
| 14. 2 Warehouses | 37. Administration Building |
| 15. Warehouse | |

SHELL LOADING PLANT
Shen-yang, China

CIA/PID/IB-
P-787/63

25X1D



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25X1B

ILLEGIBLE

- 1. Headquarters and Administration
- 2. Processing Building
- 3. Processing Building
- 4. Rolling Stock
- 5. In Service Building
- 6. Warehouse

PROBABLE AMMUNITION LOADING PLANT
Shen-yang, China

25X1D

CLASSIFIED
R-705/CS

SECRET



WEN-KUAN-TUNG (UBAR) (40th or 50th)
Eben-yang, China
41° 52' N - 123° 25' E
25X1D
CIA/DP/IR-
P-722102

EGIB